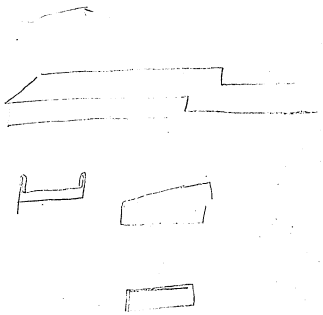
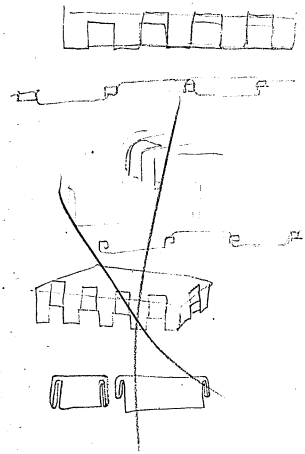
Notebook, N-03-01-22

This notebook covers the period January-February 1903. All entries are by Edison. The book, which has been used in both directions, contains notes and drawings regarding electricity, physical theory, and the nature of matter and energy. At one end are entries pertaining to various experimental projects, including "xyz rays" and etheric force, x-rays, storage batteries, and fluorescence. At the other end is a list of chemical compounds to test in "xyz ray" experiments. A notation at the end of the list indicates that this material was recopied into a "big book" (Miscellaneous Notebook, E-4296). The pages are unnumbered, and at least one page has been removed from the book. Approximately 100 pages have been used.





70-

24 | 216 (9
216

15 300

600 - 1,800

1600, - 1600 mg

2.16 - gm

6 | 120
20

1 | 6

10-

3 | 120
40

36-
90
324
90-

3.6

75
36
45-0
225-0
270
2 | 270
1350

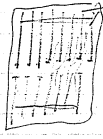
45-0 | 1350
1350

3 Lbs.

180-

160-

120
50
70



Jany 22 1903 –

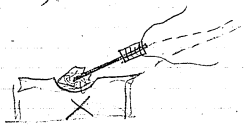
Try and photograph the outflying sparks from different metals by losing a current with big Condenser surface, Each metal gives a specific kind of spark – also try Sparks from abrading with Emery Cobalt, Try powders Reduced by Hydrogen Throw in Carbon & generally investigate this subject. Try alloys & see if the 2 or 3 metals can be detected by the spark –

Investigate the smell of Tin,

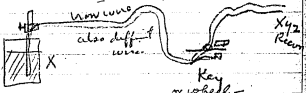
Test the variation of friction when metals are used as one pole remember old Experiment with Tin

January 22 1903

Run down the argillaceous smell of alumina, clay etc, all clays smell, also precipitate alumina, suspect alumina lose smell by heating red hot, What is this smell,



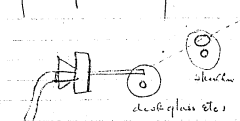
X Blacksmith forge — anthracite or Coke, iron rod one of any thermo C dittto when rod magnetized —



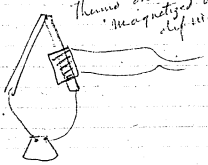
X Cup with acids or other liquids ultatily the metal.

January 22 1903

Theory being chemical reactions
sensitized and as waves through
wire — can use wire wire —
Connect diff metals in cell —
perhaps a ray comes and

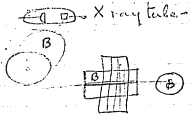


see if light affects formation of
photo. paint on glass etc,



Jany 22 1903

Try small cylinder pears soap in Mol. graph —

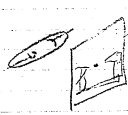


B core cylinder of metals with 10/1000 hole in center or less as 3" long — Lead Iron brass Cu etc so X ray beam goes through Coil on outside see if effects it, also heating etc

Possibly some of the many fluorescers I have found does not fluoresce to X ray but to other rays, possibly a screen that would cut off X ray might not cut off a ray that would

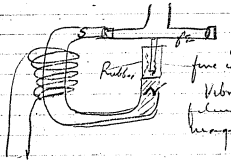
May 22 1903

fluorescence to come, Try Experiment by Eye & photo on slides, with different absorbing screens to see if the screen acts alike on all — Make a special slide with all the fluorescers — then absorb by plate glass, then air then aluminum, etc if all act alike then its all X if not then there are other rays or special fluorescers —

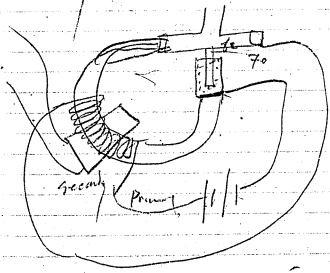


lead fine 002 hole — look fluorescence — try magnet pole — also light ray also jump sparks on ray just as it leaves lead to see if it can be affected — flame — etc, light, etc.

Jan 22 1903

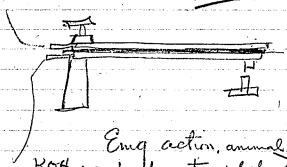


fine iron filings —
Vibrations dislodge filings & vary the magnetism,



Double action varies Mag & Current,

Jany 22 1903



Emg action, animal membrane
KOH, neat, fly-two phalanges opp'g
possibly glued to, such of light
Changes stiffness + one side
relaxes other stiffens hence
Spring Curve,

possibly a long piece of
Carb | Strip | with KOH +
foil pasted on sides would
Cause bending —

Perhaps in phalography fluorescent
slides, different results to be
obtained by having them in
Magnetic field —

Jany 22. 1903

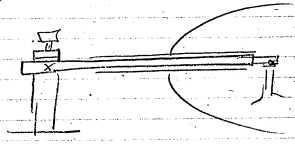
X Ray tube from pole, try effect in magnetic field.

Connect wire to top of flag pole on Laboratory, & connect end to X ray tube at top, & bring down into phosphorescent room.

Dont forget to make reports of Cogitations over the ore body for sudden changes in Earth's Magnetism also for sounds due to rapid vibrations of ore body brought about by Coosmical Nonsolar changes & Spot movements.

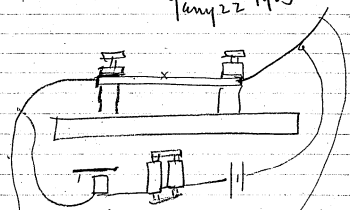
June 22 1903

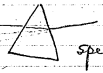
possibly there are very rapid
Barometric waves continually
occurring. These could be detected
by an Aneroid diaphm —
or Telefoni, or Carb button — Emg
or direct listening or a Mirror
slot + scale



X is piece of ground Carb
Otherwise two disks on each
side not touching. static
Wave changes legend to
one side, bend, Emg action

January 22 1903

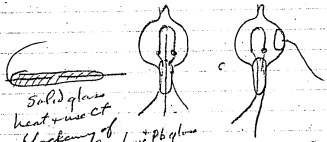


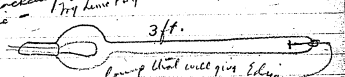


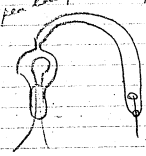
Dec of X ray passing prism,
disturbs Spectroscopic image

June 26 1903

Complete the experiments with the Center wire in lamp bulb also with pt foil outside the bulb, get granulature measurements.







over

May 26 1903

See if X ray will change the Conductivity with Central wire,

Try Alternating Current
possibly it will give continuous Current, & act as a transformer

Try Center wire bulb in oil to see if temperature affects quantity Current,

Use phaloumber & with Weston measure Current & Voltage & Power as lamp is heat up until bursts,

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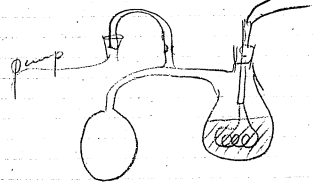
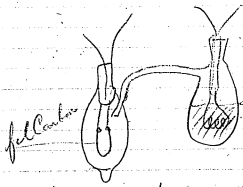
Try and reproduce the Peacock Colored films within the Lamp bulb when gasoline is inside bulb & heated to get Vapor —

January 26 1903

By distilling in a Vacuum ~~and~~ by ~~pt Cracks~~ platinum wire & paraffine etc see what it does –





distill in Vacuo & Crack by heat of filament & get new compounds

Jany 26 1903

Try the best fluorescers for light in Becquerel phosphoroscope & get one that has most brilliant phosphorescence for 1/20th of second dying out within that time so a screen for the Kinetoscope can be covered with it to and in giving a more perfect picture

Test all the fluorescers phosphorescers for X ray & light for light taken shaken in vacuo tube in dark also when ground in glass mortar & powder in the dark, recording relative light

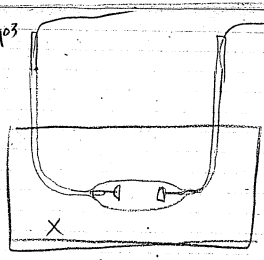
Jany 26 1903

I believe that it is only the hydrated peroxide of lead that is active in Storage batteries, hence to make a Lead Leland Mix hydrated peroxide Lead with our graphite moved in block the lead perfect pocket + use Sul acid + amalgamated Zinc —

Try of Leland's CuO plates soaked in H_2O in Nitly to get 5% H_2O into pores of CuO plate keeps walls wet abs. Zn in twice the present solution —

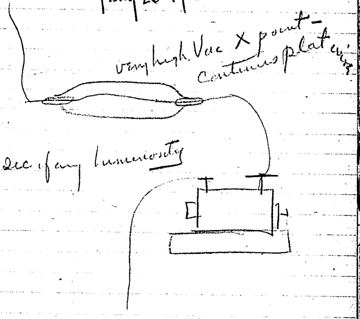
Possibly CuO can be molded under pressure + used to better advantage, as to Vallays etc,

July 26 1903



X ray tube with glass
quartz - immersed in
H_2O also Liquids which
absorb X ray in X Tank
Notice phenomena —
also Coal Liquids —
also hot

Jany 26 1903



If Ions are free then $FeCl$ or $FeSO_4$ Electrolyte should deposit to one side in a magnetic field —

Monochromatic Light Sodium Bromide is best salt in Open flame Hg for Tubes

Jany 26 1903

Radium may be radiant matter at ordinary temperature while other matter would radiate at higher temperature. Try phosphorg thro opaque sheet from incandescent metals kept hot by flame or current, also — H flame, also monochromatic light from salts. of metals. Sal Bromides by wick in flame gives 24 hours time —

Make a transparent cell that can be put in a camera like a dry plate. Use say Cu electrotype & polished Silver plate & a wire of Copper & focus a picture on plated from arc light or sun & then deposit Cu with extremely weak current so just show — see if light affects deposit so a

January 26. 1903

to give a picture

Try Chloride Na solution & gold with iron to take C and H, trace of Chlorine flush of colors is blackened, if not develope trace

Try acetate Lead Mn Ni + Co Salts to make black oxide deposits very faint —

Use spectroscope + monochromatic light pass X ray through the light

Try diffrent vapors of metals Especially heavy metals in form in air — Hg tube, other metals in Vac tubes also in addition to X ray put both in powerful magnetic field

January 26. 1903

In Capillary tube + bulb 1/4 dia

fill with good absorber of X ray & test if absorption moves Capillary Column

Celluloid Cell with dif Electrodes & Solution with galv for Voltage. put in Mag field also use cell as a diaelectric, also act on it by X ray on both or one Electrode also in out Mag field, also heated, Cooled + while strained

9 mo 26 1903

Make a small Coil with inside big enough to take the Thermo alloy button. was made by Elec furnace & by Rick method test the Magnetism,

See if X ray affects the Catalytic action of platinum black

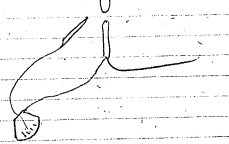
find a semi permable ~~ar~~ substance for def rays from Vac tube, to seperate the def rays + photo them —

Jany 26 1903

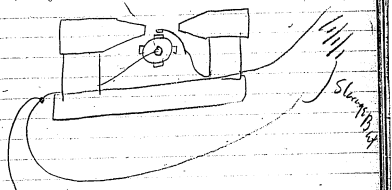
sound mechanical vibrations into a long buried steel wire, use microphone pointed on end of wire to make a sound. have this sound control a second Mechanical vibrator to send into a 2nd wire with proper resp. which might talk from NY to Phila.

The internal kinetic of the molecules by surrounding fluid with coil & use breath which with air blown Spark would photo heat molecular disturbance or heating coil [illegible] in water.

See if the Carbon wire used in Incandescent will if connected to arc light give a current



One break better — Big Mag May 26/15



Big Mag break it
up in the field
get a snap like a Cannon
or by Ether etc —

Ether powder

It seems to me that a peculiar thermo could be made by using a metal having a very low specific heat like lead joined to one of great specific heat and only get current by momentary heating the low specific heated wire. I get quite hot before the other showed much of anything this shows

Jany 26 1903

do something although the joint when both same temp. might not give anything, possibly might give XYZ — ?

by proper Commutating of the heat extremely powerful thermos might be arranged —

spec heat wood charcoal	0.24
Crystyd Boron	0.25
Magnesium	0.25
Lithium	0.92
Lead	0.03
Bismuth	0.03

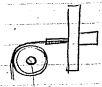
Perhaps the momentary throw of the galv when one drops a metal in a electrolytic cell is due to above action,

Magnesium & Bi or Lead

Shaned work.

January 26 1903

Why is it that when a sparking tube is working that the rubbing of the hand or finger over it make it look like Wheatstone's that would show that a static Molecule is possible — Thus



Glass cylinder Very thin walls filled Hg + connected to Earth the gold foil rubbing on glass + connected to Dynamo —

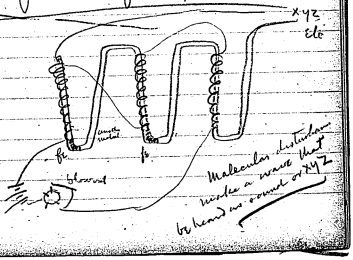
Melt some magnesium, ditto aluminum in Very high Vacuo, + pour to oxide in Inlet, Cool. Use current to melt & think both Mg + Al are alloys with Oxides + in this way can get them pure — possibly they could be distilled in Vacuo high —

January 26 1903

It is very strange that a ring gives no coloration to Vacuum tubes by opening. Why? –

What effect X ray have on a soap bubble,

Make some of those phosphate glasses & see if they can be blown also other chemicals of glassy viscous nature capable of being blown so as to get X ray tubes & cool filament of carbon in –



January 26 1903

If Ions migrate at dif velocity

then a vane or plate suspended in Electrolytic Cell w/ Brownian movement

Can be detected by Murray's

Beam of light showing moves

by the unequal movement of the ions

(A platinum negative should

be capable of printing by

X ray as pt absorbs ray)

In addition to the Electric waves

of an oscillator or Coil used

by Marconi there must be a

Sound wave sent into a space

perhaps a flame would detect it

a million vib a seconds would require

a resonator 1/64 long possibly

a porous plate 10/1000 thick

By 1/4 dia connected at base of

sensitive flame the pores would act

as resonators + affect the flame

9 Jany 26 1903

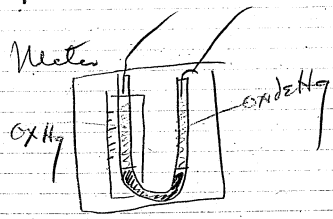
If this is so the possibly the Mclough might work instead of Brankley the friction being given on dry porous substance by rarefaction & condensation of air in pores.

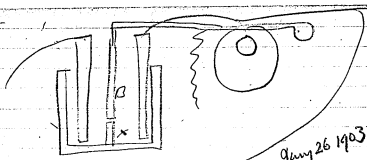
If X rays are due to particles shot out then a disk of platinum 1/2 dia suspended by single fibre silk & provided with Mirror, scale & lamp & screened from X ray on one half should give deflection when ray strikes —

To my mind what we call the X ray that photos & gives fluorescence is a sound wave ~~& the~~ or gust of particles

9 Jany 26 1903

X Ray bulb within another bulb with Electrodes, one of steel to get very high Vac & see if X ray pass thro the high Vac from the 1st bulb —

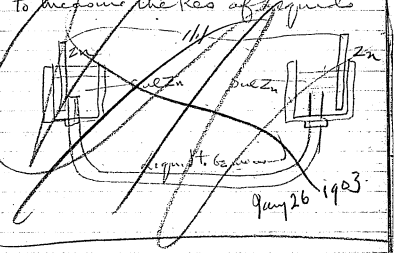




Jany 26 1903

Sparkless make & break Rubber
Cell Sulph Zinc Zinc Electrodes
X partition upper half moved
up & down. Liquid Conduction
practically stopped when
B touch. X - etc
Could use magnet & shu
shutter to make it automatic

To measure the Res of Liquids



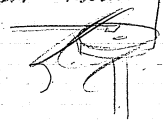
Storage Battery submerged with PbO

ROH Electrolyte, grid filled with PbO_2 Hydrate, Copper finely divided in other grid, (when discharged)

$Cu_2O + PbO_2 - Chg\ PbO_2 H_2O +$ Cu metal –

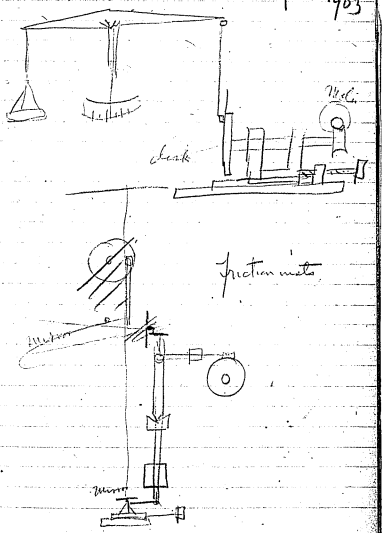
Instead of Cu possibly another metal not decomposing pb salts could be used,

It is possible that friction between different kinds of hydrolized matter is very susceptible to alteration by all forms of Energy — stress, & that mechanics based on alteration of friction would lead to the discovery of many phenomenon which phone with Al trihydrate sensitive is 2½ times more sensitive than Bell phone



OVER

May 26 1903



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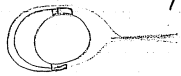
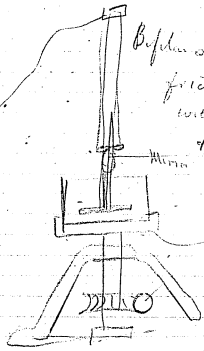
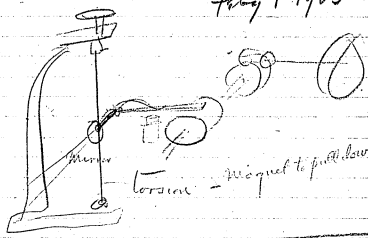
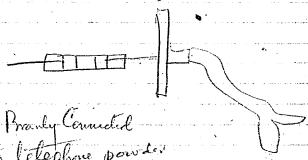



Bifilar suspension
friction liquid,
with diff liquids
+ poles
Mirror
Motor
X42 E etc

February 1 1903





Prawley Connected
to telephone powder
makes sound

Feby 1 1903

friction wheels

Pivot

photographed where it touched

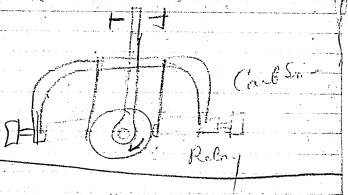
Carbon

Rubber

Relay

wheels keep rotation on circuit

Motor



Qual Expmtal purposes

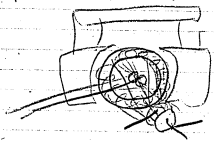
Chloride of Silver fused in air atmosphere of Chlorine is perfectly transparent
ditto Br Silver in atmos Br
ChlK BrK KF from clear crystals produces on fusion perfectly clear molasses

Arsenic Sulfide with sulphur 3 of S to 1 AsS solidifying to soft amorphous mass are becoming hard & brittle after cooling

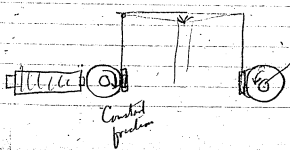
Phos'

Feby 1 1903

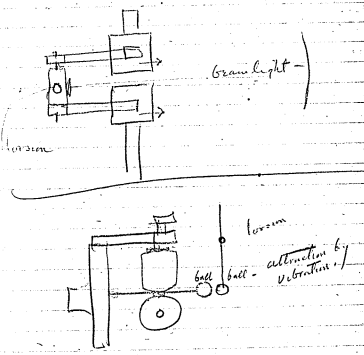
What is the effect on a ring armature if wound with a Coil + two Current rings + the now saturated + soft iron this the Ring Dynamo working is part with Commutator



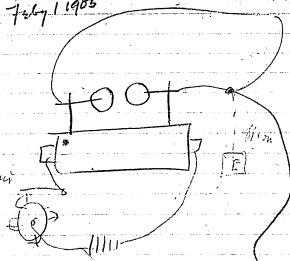
It might do away with the sparking friction Ring Joints



Feby 1 1903


Gram light -
Iron stem
loom
ball
ball - attraction by vibration.

July 1 1903



Bombardment and waves
made by Condensation
carried through wire
Used Cu Fe + XYZ
metals at end cut off all
Elec by burying 100 ft
or more

Thus old gas many million atomic
knocks per second exhausted
note some XYZ met at
great distances, in bare wire
Buried in Earth
Possibly X ray tube gas better knock

Feby 1 1903

I am almost sure a primary ~~with~~ galvanic electric will do wonders as good as coal all that is necessary is an extraordinary strong break.

---

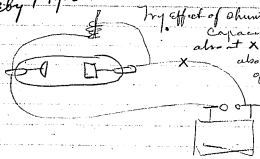
possible a storage battery could be made with both electrodes ~~of~~ only spongy Copper in KOH, on oxdg to Cu_2O the other plain Copper ~~with~~ forming bottom of cell - in which Selenium powder covers on charging Spongy Cu ~~[illegible]~~ oxdg to Cu_2O while Se combines with H to form sesquiseleniated H dissolved in acid on discharge O oxdgs the H & Se falls to bottom & so on — fallacy probably in this ⊥

Feby 1 1903

Put a little test cell in Fe storage in strong Mag field see if action if Mag on Fe effects Cu-Pb on Zn while being charged & discharged perpendicular + Right angles

Hydrate of Pb (Copper)
Copper plate, Electrolyte
Sulphate Cu Pb
Charged Metallic Cu per ox Pb
& Saturated sol Sul Cu
Discharged - Ox Cup -
PbO_2 reduced to ox + formation
Sulp Pb -
No reduction of Pb on Cu
as its below Pb in Scale
Nothing falls off Cu + Cup
~~[illegible]~~ not affected

Feby 1 1903



The Universe is composed of matter + the medium —

Matter disturbs the Etheric pressure —

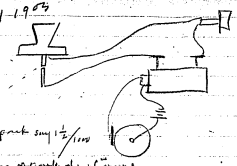
All transformations of energy is the transfer from high to low pressure in the medium —

Transfer is brought about + is transmissible by the difference between the tension of the matter + the medium —

In a battery the oxidizing acts as an abutment to throw out the strain wave acts by its inertia relative to the medium — The wire of the circuit is the plane around which the waves pass the inertia of the wire permitting

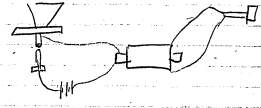
Right angle rarefactions + condensations in the medium, without loss of energy except in the wire which not having perfect inertia or tending at absolute zero the metal of the wire would have probably almost perfect inertia relative to the medium. The strices travels along defer light towards to the wire & the waves are very long at right angles to the wire.

July 1-1953

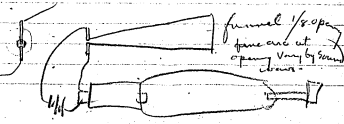


Gimmicopark any 1½/100

Varying spark distances increases - decreases Volumn Sound by talking wheel to make, higher note than piccolo any 12000 - sec -



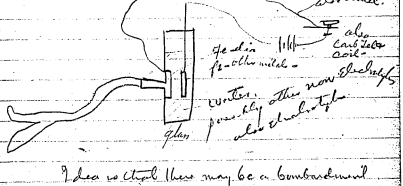
Carbon points, very fine one - very one by vibrating disc -



Feby 1 1903

Try using Eng with Carb Shunted as a battery when Turning its Reversable, see how voltage is also what ampere can be got from it, possibly a low resistance could be obtained —
also try with different metals both holding Cylinder + point, might be lot of phenomena come out of it —

Form precipitates within the pores + semipermeable materials

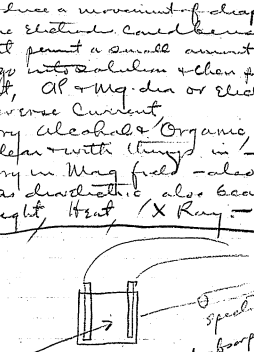


Idea is that there may be a bombardment of Molecules producing a pressure

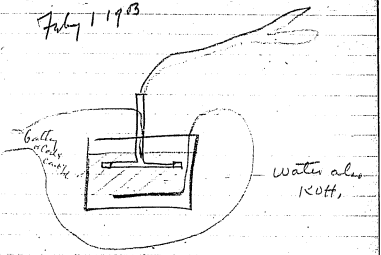
C.

Feby 1 1903

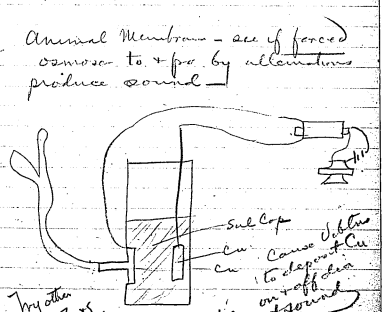
possible an electrolytic Compound
fused be thrown into a bit of solution
for small wires & the osmotic pressure
produce a movement of diaphr —
Some electrodes could be used
that permit a small amount oxide
to go into solution & then plate
out, Al & Mg. dim or electrode —
Reverse Current
Try alcohol & Organic
clean & with things in —
Try in Mag field — also
as dielectric also bacon
light, Heat, / X Ray —



February 1 1903



Animal Membrane – acc of forced osmosis to + pro by albumen produce sound

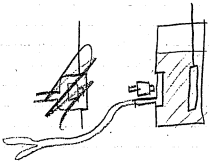


Feby 1 1903

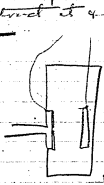
the throw of the Molecule of Cu should more dia, —

Co deposits under strong mag'tic might be good —

Also put a magnet ~~so that~~ set dia + base Fe to deposit,

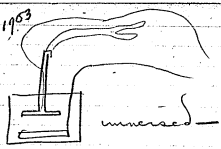


then when Fe deposited on say Cu the mag attract it & produce normal —

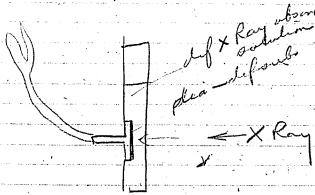


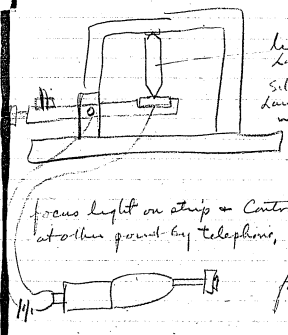
possibly dia of wire with 1/8 inch Cu in Centre do deposit Concentrated rays blow at most sensitive points

July 1 1903



This form would be very handy to try quickly a lot of Experiments on this principal — Make tab wheel also Carbon Tel & Coil — perhaps dielectric oils would be good — Sensitive flame made and Eu tube might detect flames of extraordinary pitch —





focus light on strip = Central beam
at other ground by Telephone,

Feb 1 1903

On solver deales for Carbon Telefone
probably a number of metals advised
by H from their oxides would work
Pt black, Ag Cu Ni Co, Bi, Au Pd
Ir Ru = also NiS, + Si amorph =
our graf = also amorph graf purified
as we do it =

Experiment with sensitive flames as it may be possible to get them in connection with a telephone far more sensitive than the ear — possibly the movement of the flames could be used with device on last page to repeat & thus get infinite sensitiveness, strangely — possibly sensitive flames would be modified by strong field of mag as it has great influence on flame —

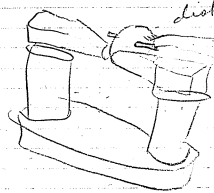
Possibly combustion in flames are a series of molecular explosions and if so these explosions might be propagated to a distance to affect another flame both sensitive a shutter a telephone showing it up —

2/1 1903.

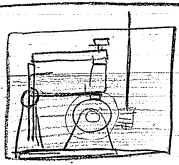
Feby 1 1903

As a flame is so easily affected by a magnet perhaps it would give an alternating current if placed between prongs of a permanent mag surrounded by a Coil + a telephone used with revolving wheel etc to break it up into waves or a Brunlay would detect the Current or a Bifilar Electrodynamometer with no wire — This would be a great scheme, the malacular explosions disturbing the lines of force — possibly a Trompe could be used with the gas to throw flame in a belt of the field this gives sounds or waves

Feby 1 1903



11/1903



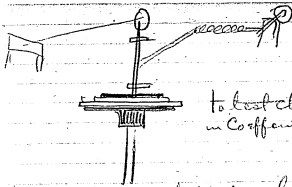
A coil of a Galvanometer to test Thermo Current produced by Rubbing the cylinder being of one metal & the point the alloy immersed in distilled water — test current with Weston galvanometer

See if the scintillations of Mg
Fe etc occur under distilled
water, also gasolene —
also in Vacuum ? ? if preserve
their character — also see how
scintillations are changed
in strong magnetic field —
or within helix with powerful
current passing —
also in powerful static field.

Try X ray 24 hours on a
flower in pot — having leaves
= guard 1/2 of leaf also 1/2
of flower by Lead sheet.

Coefficient of friction should
be changed by X ray —

Feby 1 1903 MC

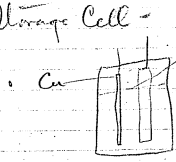


Feby 1 1903

to test change in Coefficient friction

by Current X ray light etc flows
dukes, ground dead flat.

Storage Cell -



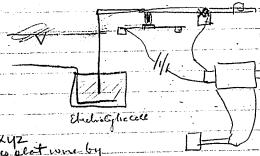
Manganous Sulfate also sulphates
of Metals which are decomposed by H_2O
to which form quadric salts

Charged Cu - Cerric Sulfate
deposits Cu_2O Cerrous sulfate

Feby 1 1903

possibly instead Cu metals
finely ground scale could be used
So long as they will not reduce
Carrier to Cerous of themselves
possibly Pb, Tin Sb, Co perhaps Fe
but doubtful — all finely divided
with Hg alone or Hg + Cu to insure
Conductivity — thin grid —
Possibly Cobaltous Cl Cobaltic Sul. Cobalt acid

Better try Cerium hydroxide once more
getting paste stiff + mix 6 + 4 instead
of 8 + 12 400 passes + see if
possible to gilt it cat as well as
$Ni(OH)_2$



Current or XYZ
Either moves plat wire by
Surface tension or gas
to work microphone

Feby 1 1903

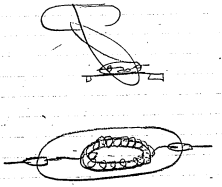
Deposit Fe on glass in high Vacuo, do it on the pump use double electrode, each a loop so a current can be passed through loops to heat it & drive off gas etc, then by spark deposit on glass one side protected, want to see real color free from oxides —

Try all the other metals that may including Silicon, Mn, Ferro Mn Tungsten Chromium, Tellurium — Sulphur? — Selenium — Carbon? etc. Tu Sb Zn Cd Ag Au Pt Ir Ru Pd Ru ~~#~~ Os Pb Thallium — Co Ni, Mo & the rest — Try PbO, pyrosulphite, Sulphides of metals that will conduct

only Coat so not opaque —

Then use for Magnetism Light, also Conductivity of Current

Feby. 4 1903



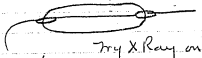
Very high Vac — small iron ring with foil wire, Balance in Bridge + Read Rich right along as Vac increases to see if any changes in Current —

Also. Wind Spool with 1000 ohms + put in Vac, put in Bridge + measure Res as Vac goes up

Also try if Rapid breaks also Reversals make any difference —

Feby 4 1903

If a Branly will work surely a gold leaf or equivalent will work by a beam light on the shadow could be used to read by also use it for XYZ Rectifier —



Try X Ray on Continuous wave in Vac —

Try jump spark points with sparks adjusted so it will not jump except in Ultra violet light shines on it — then try if any opaque thin sheets will conduct the ray that causes it to jump — also try, monochromatic lights, also proximity of chef metals Try X ray also — & thro opaque —

Feby 4 1903

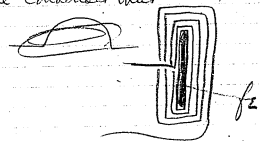
Since the Nife Storage Bat has such enormous discharge rate Could use a primary like Eltric + by breaking 1000 amp in bat poles by mere get an electric 00 henrandom that the X ray tube would give extraordinary results also Would it should make Enormous Vallage of a secondary used + a vicious spark bet balls — The number of breaks Could be 1 or 2 so a few turns small wire which might melt in 1 second (~~would~~) with 100 amp would stand 1000 or more for a fraction of a second (10) ordinary Zn Ihem — Could use it in oil — also a single Coil would give enormous results without new possibly have to immerse in Oil — But this would make it less Shaup possibly put in Vac tube would get new results in self induction would be at Minimum — This one end now were should ~~get~~ act as

Feby 4 1953

a powerful Molecular
Sledgehammer for XYZ
Waves

Remember old jumpers at Poerck
giving jumpers spark -

Make Condensers thus



foil Copper Cut thus + wound
around so that we have 10 or 15 times,
as many disks as on jumbo insulated
with paper & oil, then see
Results with Several hundred
Amperes of jumps, put in
oil & see about Etheric ?

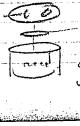
XYZ =

Feby 4 1903

If an X ray tube a molecule strikes glass then stress passes through & an air molecule is thrown like a Cannon ball into the flesh (1-2) inches then

A dish containing an acid in which the most sensitive reagent for a metal is in the acid solution the intervention of a very thin metallic plate between top of cell & X Ray tube. The metal shaved off thrown into the Electrolyte & in time give the Color reaction,

or if thrown on a platinum plate the metal would be embedded in it & after Calcining for a while put put in acid & solution metal located by reagent then will prove of metal is actually thrown by X ray



Feby 4 1903

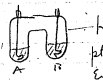
Perhaps a more sensitive test would be to put a platina plate within a hydrogen flame & then between the X ray tube & flame put the very thin metal the X ray would throw molecules of the metal against the metal & the flame would give the spectrum line, Rock salt or Lithium Salt crystalized in fine lat of large crystals could be used.

perhaps by using a hydrogen flame & metallic nozzle to Earth a platina scoop with a metal or oxide of high fusibility in it in flame that it could be used as a Brauly or X ray with Spectroscope,

Feby 4 1903

Make a small Tungstate screen the Crystals being mounted on thin dense glass by fusion, then try effect of Resistance increased or diminished by heat or Magnetism or both. Try these for other fluorescers.

There might be a storage cell in high Vacuo to get low temp oxidations



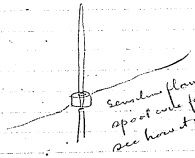
Try chemicals - high 1200 volt, current produce vacuum electrolysis — finely divided nickel in one — Try Ni_2O_3 in other, Per ox lead in one fuse lead in other — PbO_2 in one Zinc Al Mn etc in other the passage of spark or Current in one direction changes it in other direction discharges it O Combining metal gives bright light at very low temp & cold light like opals

photo

Feby 4 1903

Possibly tubes exhausted beyond X ray point will be best to get XYZ or connect with the medium free of matter, remember steel electrode absorbing residual so cried get no spark — then perhaps the 1000 amps Etheric coil wld give new XYZ ray —

Possibly above tube in powerful Mag field — also Ultra Violet from arc light,

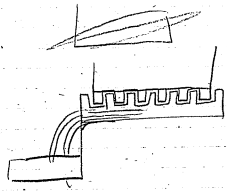


Feby 4 1903

In small Motors cents Eli

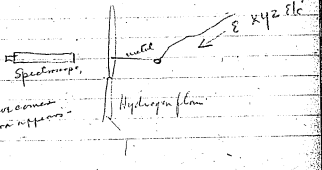
why not increase reacting surface

armature for magnetic lines thru



could double the surface + 1/2 Res.

of our gap —



When warm comes

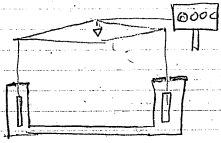
Spectra appears —

Feby 5 1903

Oxalate Uranium very sensitive light, actually a solution of Ox Ur decomposed by light giving $CO\ CO_2$ - Remarkable salt,

15/1000 perf oical frame 4X4 ~~frame~~ Window of 1/1000 Collodion 1 or 2/1000 gelatin colors chameleon —

This to take place of glass dry plates to cheapen lightly manipulate as with steel Kinetograph film —



Electrolyze Nitrates using KOH sol a

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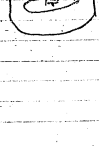
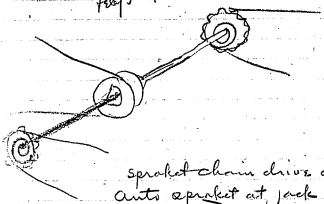
Storage battery Cups of pure nickel with $Ni(OH)_2$ + plat or Ni wire — both about 3/4 charged — Then for 1 lamp Regulator say 2 hours to block 6 ohm of Counter + recording device — as $Ni(OH)_2$ is endothermic, results should be perfectly accurate, Fe with Hg 25% might work — also HgO alone in cooling prod with great excess fine graphite — Rafn now testing Shunt in main line + The Electrode could have double part device



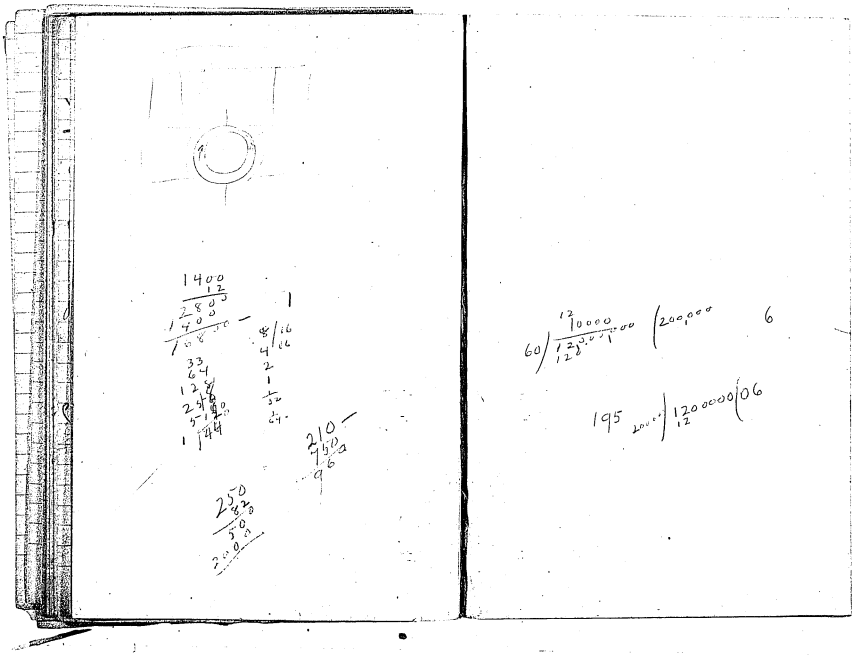
+ fine hole for wire to prevent Carbonating

July 5 1903



sprocket chain drives on
auto sprocket at jack
differential not keyed on but connected
through rubber spring to take shock
off chain =

[THIS BOOK WAS USED IN BOTH DIRECTIONS. THE FOLLOWING PAGES WERE FILMED FROM THE BACK END FORWARD.]



Photography X Ray XYZ

Iodide of Hexyl acted upon by Light

— " —

Mercurious Iodide exposed to light turns yellow then red.

— " —

Calomel becomes dark grey when exposed to Light.

— " —

Mercurious-Mercuric Iodide Sensitive to light.

— " —

Mercurous Oxide decomposed in weak light, even by pressure?

— " —

Mercuric Oxide gradually blackens in Sunshine.

— " —

Tetra mecuraimmonium Carbonate.
turns grey when exposed to light.

Mecuric Iodallylide changes
Color when exposed to light

Mecuric Iodethide easily decomposed
by diffused daylight

Phosphate of Methyl turns
grey in Light — Watts 993 3rd Vol.

Possibly syrian asphalt on glass
in Chlorine would be acted on by
Light also film Chromic acid
on it where oxidized become insol
also gelatin surface in Chlorine
" " " with Al_2O_3 put
on surface + exposed also Sodium
per oxide Hypochlorite Ca
permanganate Soda Co_2O_3 etc

Acetylene either pure or mixed with other gases sometimes detonates with Chlorine even in diffused daylight. Whether either is in excess, products are HCl + Carbon

Bromine even on foggy day unites with Acetylene = after a time explosion occurs

Allylene is acted upon by Bromine in the shade.

Allylene di-Iodide turns brown in light.

Iodallylene C_3H_3I Crystals inch long Very sensitive to light. 1st Sup Watts page 97+98

Benzylene Bromide, is an oil, changes color when exposed to light.

Orthotolyl Mercury salt crystals decomposed by light, ditto the Lead salt? —

Nitrobromoxylene ( ) turns red when exposed to light. 1st Sup. page 294 —

Diamidomesitylene turns red when exposed to light Crystals — 1st Sup. 300.

Anthranilic Acid or Amidosalylic A. The Lead salt turns yellow when exposed to light.

Paranitrobenzyl Alcohol Crystals turn yellow in light,

Several double Iodides of Bismuth (1st Sup. 348) are quickly altered by light especially violet light, The surface altering Bi Iodide does this also.

Solution of Bleaching powders or pure Ca Hypochlorite gives off Oxygen in light,

Chrysogen solution turns colourless quickly in light, 1st Sup. 459.

Acid Potassium Vanadate in contact with organic substances turns blue in light, 3rd Sup 1233

Oxalate Mercury sensitive to light & Radium emanations,

Phosphenyl Di Bromide liquid turns yellow in light & decomposes depositing a red substance,

Benzyl di-selenide, Crystals, Exposed to Sunshine turn from yellow to red,

Ammonium Benzyl Selenate. White crystals turn black on exposure to light,

Conine Hydrobromide turns red when exposed to light.

Tetranitrodinaphthylmethane Liquid turns yellow when exposed to light,

Dioxythymylethylene Cryst Easily altered by light,

Benzene in sunlight in presence of H_2O oxidizes many organic compounds (neutral) to acids such as Benzoic Toluene Mannite, Sugar glycerine.

As mediums for films on glass for holding substances acted on by light
Albumen, Agar agar Gelatin
Collodion Paraffine Dammar Varnish
Rosin in Alcohol to the resins Aluminum
Trihydrates Gelatinous Silica, Silicate Soda
Gum dextrin Tragacanth Starch
Gluten Balsam Fir Gutta Percha,
Rubber, Balata, Mastic Varnish,
Amyl Collodion, Shellac Varnish
Iceland moss, Fish glue

Plates of all the inorganic acid salts containing different metal with Silver such as Tungstate, Chromate etc.

Cuprous chloride very sensitive to Light
1st Sup 493 — 3rd Sup 566 —

Tungstic acid in presence organic matter
reduced to Blue Oxide By Light.

Iodoform dissolved in Bisulphide of
Carbon is excessively sensitive to Light
Colored violet owing to liberation of Iodine

Uranyl salts highly sensitive to Light.

Gold Trihydroxide decomposes and
gives off oxygen when exposed to
light,

Aurous Cyanide must be made &
washed in dark, very sensitive to light.

Chlor-auric Acid sensitive to light,

Note, Possibly Iodide of nitrogen in gelatin etc on plates might be decompd by dif rays ultra red for instance so could photo in dark, or X XYZ

Formate of Silver decomposes when moist, even in the dark. Formate of Mercury does the same thing Crystals decomp by pressure, possibly radiant heat decomposes it in dark.

Potassio-Mercuric Oxalate sensitive to light and heat.

Ammonio-Mercuric Oxalate "

Diazonitrophenol yellow powder turns red on exposure to light,

Also Diazonitrochlorophenol.

Platinochloride of Diazobenzidine
Crystals when drying turn brown when
Exposed to light,

Hydrobromate of Azophenylamine,
explodes violently by heat, friction, or
pressure,

Nitrate of Azophenylamine, explodes
with terrible violence exceeding
fulminate of Hg or Iodide of Nitrogen
explodes at 100° friction or pressure
Causes explosion,

Azobromophenylamine is a very
dangerous compound, the slightest
pressure or contact with a rough
substance causes it to go off with
fiery explsn exceeding Azophenylamine

The Chloroplatinate of a Chloranilin gives cryst. that turn violet when exposed to light.

Ethylaniline decomposed by light,

Ethylidene-diphenyl-diamine cryst gradually turn red when exposed to light,

Calcium salt of Nitrocumizic acid gets darker when exposed to light,

Ferrocyanide of K solid & liquid slowly decomp to Prussian blue by light.

Ferridcyanide of K very easily by light

Nitroferricyanide K. changed by light

Nitroferricyanide Sodium more sensitive to light, giving prussian blue

Dry HgCy in chlorine gas decomposed by Light

Evidently there are numerous substances that can be put on glass or metal plates within a cell with chlorine, & photos taken in Camera, also XYZ + X Ray

Cyclamin turns brown when exposed to light, a solution in a sealed tube exposd to light deposits a white solid.

Digitalic acid affected by light

Many organic substances prone to Oxidation at slightly raised temperatures in the dark, not oxidized but when at same temp are exposed to light they are rapidly oxidized. Especially Indigo blue, Turmeric, Color of flowers set bleached. -

Ericinone, Cryst, affected by light;

Iodide of Ethyl colorless, if allowed on Hg & exposed to light it decomposes red Iodide of Mercury formed liberating Ethyl better metals than Hg does it. This is good substance to experiment with.

Monochlorinated Chloride of Ethyl — Chlorine dissolves in it abundantly & there is no action in the dark, but when exposed to light, a violent action starts & torrents of HCl come off. Evidently light has some connection with Chlorine in Chloride of Silver in regular Photography

Chloride of Gold in Ether deposits gold when exposed to light.

Ethylene-Dichloride of Platinum, (solid) becomes brown or black when exposed to light.

Fulminating silver blackens when exp'd light

Furfurol turns brown in light + some even in the dark.

Gallotanic acquires a yellow color on exposure to light.

Trichloride of gold decomposed quickly to gold when exp'd to light

Auric oxide reduced by light

Guaicum changed by exposure to light especially violet light.

Acid chromate of Quinine rapidly decomposed when exposed to light.

Racemate of Hg colors on exposure to light.

Hydrocyan-Rosaniline colorless, turns rose red when exposed to light

Rosolic acid — Rosolates easily decomposed by exposure to light losing their color.

Ruthenic Tetraoxide soluable in water rapidly decomp when exposed to light.

Santonin turns yellow on expo to light
Dichlorosantonin "

Sapan wood or Brazilian, sensitive to light

Ammonio-mercuric Sulphite decomp to Hg globules by light it even decomp in dark in a sealed Tube,

Meta ~~napthy~~ thiosulphurous acid the Lead salt turns brown when exposed light

Chloride of Thallium decomposed by light

Thymöil a product of Oxidn of Thymol decomposed by light.

Thymol in chlorine gas sensitive to light

A certain protoxide of Tin blackens in the Light.

Acetate of Ethyl in chlorine in sunshine Explodes.

Aqueous solution Citric acid in chlorine in light changed to Hexachloroacetone.

Iodide of acetyl in presence of Hg decomposed by light.

Iodide of Monowallyl turns yellow in light.

Sulphurous—Iodotrimethide (p. 885 Lastral Watts.) Crystals quickly turn brown on exposure to light.

Mercurious Benzoate turns light yellow in light.

Cacothelene product action Nitric Ac on Brucine turns brown in light. Vol 1 700.

Sulphide of Allyl precips Hg turns black in light, J Watts Vol 1 1144

Arsenate Copper + Ammonia decomp by light — Vol 1 381
ditto arsenate Cu —

Heat Photo — Dimercurous Arsenate changes color by heat,

Ditto Sulphantimonite of Stibethyl powder,

Chlorine in foggy weather acts on Acetic acid to form Monochloracetic A.

Solution of acid chromate of Potassium mixed with Ammonia or Alcohol deposits brown sediment in light — not in dark.

Phosgene gas action Chlorine on Carbonic Oxide in light, forms Chlorocarbonic acid.

all in 619 book